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FILE 'HOME' ENTERED AT 12:44:24 ON 18 DEC 2007

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COST IN U.S. DOLLARS

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TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

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FILE 'CAPLUS' ENTERED AT 12:44:42 ON 18 DEC 2007

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FILE LAST UPDATED: 17 Dec 2007 (20071217/ED)

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=> s (produc? or mak? or synthesi? or prepar?) (s) (hydrogen) (s) (carbon dioxide) (s) (hydrocarbon) (p) fischer tropesch

4648675 PRODUC?

1049979 PRODN

533 PRODNS

1050162 PRODN

(PRODN OR PRODNS)

5153157 PRODUC?

(PRODUC? OR PRODN)

794941 MAK?

1645599 SYNTHESI?

1842367 PREPAR?

134622 PREP

2327 PREPS

136732 PREP

(PREP OR PREPS)

2134099 PREPD

3 PREPDS

2134101 PREPD

(PREPD OR PREPDS)

148700 PREPG

9 PREPGS

148708 PREPG

(PREPG OR PREPGS)

2867469 PREPN
 211748 PREPNS
 3026939 PREPN
 (PREPN OR PREPNS)
 5098191 PREPAR?
 (PREPAR? OR PREP OR PREPD OR PREPG OR PREPN)
 1033070 HYDROGEN
 6107 HYDROGENS
 1036464 HYDROGEN
 (HYDROGEN OR HYDROGENS)
 1329147 CARBON
 28265 CARBONS
 1339166 CARBON
 (CARBON OR CARBONS)
 510896 DIOXIDE
 6826 DIOXIDES
 512627 DIOXIDE
 (DIOXIDE OR DIOXIDES)
 243602 CARBON DIOXIDE
 (CARBON(W)DIOXIDE)
 350636 HYDROCARBON
 347226 HYDROCARBONS
 536247 HYDROCARBON
 (HYDROCARBON OR HYDROCARBONS)
 25948 FISCHER
 28 FISCHERS
 25969 FISCHER
 (FISCHER OR FISCHERS)
 8903 TROPSCH
 8787 FISCHER TROPSCH
 (FISCHER(W)TROPSCH)

L1 16 (PRODUC? OR MAK? OR SYNTHESI? OR PREPAR?) (S) (HYDROGEN) (S)
 (CARBON DIOXIDE) (S) (HYDROCARBON) (P) FISCHER TROPSCH

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L1 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:675475 CAPLUS
 DOCUMENT NUMBER: 147:97344
 TITLE: Mixed metal oxide Fischer-Tropsch catalysts for
 synthesis of hydrocarbons
 INVENTOR(S): White, James H.; Taylor, Jesse W.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 18pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2007142483	A1	20070621	US 2005-303451	20051216
WO 2007076257	A2	20070705	WO 2006-US61951	20061212
WO 2007076257	A3	20071129		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,				

CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRIORITY APPLN. INFO.: US 2005-303451 A 20051216

AB A process for the prodn. of hydrocarbons comprises:
(a) introducing a feed gas stream comprising hydrogen, carbon monoxide, and carbon dioxide into a Fischer Tropsch reactor; (b) reacting the feed gas in the reactor employing a mixed metal oxide catalyst where the reactor is operated at 100-1200 psig and 175-350° wherein the CO conversion is greater than 20 mol%; and (c) collecting product from the reactor where the product comprises hydrocarbon and water wherein the total mass flow rate of CO₂ out of the reactor is less than or equal to the amount of CO₂ in the feed gas stream wherein the mixed metal oxide catalyst is a catalyst having the formula: AuA'^vA"^wB^xB'^yB"^zOn wherein u+v+w+x+y+z=a whole number and n is a number that makes the compound charge neutral; A=Ca²⁺, Mg²⁺, Sr²⁺, Ba²⁺ or mixts. thereof; A'=Y³⁺, La³⁺, any lanthanide metal 3+ ion, or mixts. thereof; A"^w=Li⁺, Na⁺, K⁺, or Cs⁺; B=Fe, Co, Ni, or Ru ion or a mixture of these ions; B' is a Boron, Al, Ga, or In +3 ions or a mixture of these +3 ions; B" is a Cu²⁺ or Zn²⁺ ion or a mixture of these 2+ ions; 0.01≤u≤1.99; 0.01≤v≤1.99; 0.0≤w≤0.1; 0.01≤x≤3.0; 0.01≤y≤1.99 and 0.0≤z≤1.0. The catalyst compns. exhibit high CO conversion with minor levels (preferably less than 35% and more preferably less than 5%) or no measurable carbon dioxide generation. F-T active catalysts are prepared by reduction of certain oxygen deficient mixed metal oxides.

L1 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1132601 CAPLUS
DOCUMENT NUMBER: 143:369564
TITLE: Process for producing synthetic liquid hydrocarbon fuels
INVENTOR(S): Hardy, Dennis R.; Coffey, Timothy
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 5 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2005232833	A1	20051020	US 2005-108149	20050412
PRIORITY APPLN. INFO.:			US 2004-562410P	P 20040415

AB A process for producing synthetic hydrocarbons that reacts carbon dioxide, obtained from seawater of air, and hydrogen obtained from water, with a catalyst in a chemical process such as reverse water gas shift combined with Fischer Tropsch synthesis. The hydrogen is produced by nuclear reactor electricity, nuclear waste heat conversion, ocean thermal energy conversion, or any other source that is fossil fuel-free, such as wind or wave energy. The process can be either land based or sea based.

L1 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:811717 CAPLUS
DOCUMENT NUMBER: 143:213349
TITLE: Process for the production of hydrocarbons and dimethyl ether from synthesis gas
INVENTOR(S): Steynberg, Andre Peter; Greeff, Pierre
PATENT ASSIGNEE(S): Sasol Technology Proprietary Limited, S. Afr.
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005075386	A2	20050818	WO 2005-IB50449	20050203
WO 2005075386	A3	20051027		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2005210265	A1	20050818	AU 2005-210265	20050203
CN 1938401	A	20070328	CN 2005-80010708	20050203
IN 2006KN02413	A	20070525	IN 2006-KN2413	20060825
PRIORITY APPLN. INFO.:			US 2004-542088P	P 20040205
			WO 2005-IB50449	W 20050203

AB A process for co-producing hydrocarbons and di-Me ether (DME) includes feeding a gaseous feedstock, comprising hydrogen and carbon monoxide, into a three-phase, low-temperature catalytic Fischer-Tropsch reaction stage, allowing the hydrogen and carbon monoxide partially to react catalytically in the Fischer-Tropsch reaction stage to form hydrocarbons, and obtaining a tail gas from the Fischer-Tropsch reaction stage which includes unreacted hydrogen and carbon monoxide and also carbon dioxide. The composition of at least a portion of the tail gas is adjusted to provide a DME synthesis feedstock with a syngas number (SN) of 1.8-2.2, where $SN = \frac{[H_2] - [CO_2]}{[CO] + [CO_2]}$ and where $[H_2]$, $[CO]$, and $[CO_2]$, resp., are the molar proportions of hydrogen, carbon monoxide, and carbon dioxide in the DME synthesis feedstock. The DME synthesis feedstock is fed into a DME synthesis stage for conversion; process flow diagrams are presented.

L1 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:403670 CAPLUS
DOCUMENT NUMBER: 142:431979
TITLE: Gas-to-liquid carbon dioxide emissions reduction in a Fischer-Tropsch and naphtha reforming process by use of hydrogen as a fuel
INVENTOR(S): O'Rear, Dennis J.; Brancaccio, Nicholas
PATENT ASSIGNEE(S): Chevron U.S.A. Inc., USA
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6890962	B1	20050510	US 2003-720674	20031125
US 2005113464	A1	20050526		
AU 2004295296	A1	20050616	AU 2004-295296	20041026
WO 2005054164	A1	20050616	WO 2004-US35608	20041026
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,			

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

BR 2004016885	A	20070227	BR 2004-16885	20041026
JP 2007513887	T	20070531	JP 2006-541196	20041026
GB 2408513	A	20050601	GB 2004-24201	20041101
GB 2408513	B	20060308		
NL 1027593	A1	20050527	NL 2004-1027593	20041125

PRIORITY APPLN. INFO.:

US 2003-720674	A	20031125
WO 2004-US35608	W	20041026

AB CO2 emissions in gas-to-liqs. (GTL) facilities such as, for example, Fischer-Tropsch facilities, are minimized by using recovered hydrogen as a fuel in at least one furnace in the GTL facility. A process for manufacturing hydrocarbonaceous products from a methane-containing feedstock in a GTL facility comprising at least one furnace generating reduced CO2 emissions comprises forming synthesis gas from a methane-containing feedstock by means of a partial oxidation reaction. A hydrogen rich fuel is used in at least one furnace in the GTL facility to reduce CO2 emissions generated by the facility. Process flow diagrams are presented.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:102403 CAPLUS

DOCUMENT NUMBER: 142:318756

TITLE: Method for converting carbon dioxide and hydrogen into hydrocarbons through a hydrogenation and Fischer-Tropsch process using a nickel-salt catalyst

INVENTOR(S): Gagnon, Robert

PATENT ASSIGNEE(S): Can.

SOURCE: Can. Pat. Appl., 7 pp.

CODEN: CPXXEB

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2459847	A1	20040606	CA 2004-2459847	20040308
CA 2459847	C	20050405		
US 2006004111	A1	20060105	US 2004-881136	20040701
US 6987134	B2	20060117		

PRIORITY APPLN. INFO.: CA 2004-2459847 A 20040308

AB Hydrocarbons are prepd. from carbon dioxide and hydrogen via a hydrogenation and Fischer-Tropsch process using a nickel-salt (e.g., approx. 50% powdered nickel and approx. 50% pulverized NaCl) catalyst at 250-350°/2500-3500 psig over a 30-min period.

L1 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:120593 CAPLUS

DOCUMENT NUMBER: 140:165781

TITLE: Production of hydrogen and higher hydrocarbons via the water gas shift and Fischer-Tropsch reactions

INVENTOR(S): Yakobson, Dennis L.

PATENT ASSIGNEE(S): Rentech, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 6 pp.

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

CODEN: USXXCO

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004029983	A1	20040212	US 2002-213896	20020807
US 6809123	B2	20041026		
CA 2494900	A1	20040219	CA 2003-2494900	20030807
WO 2004014787	A2	20040219	WO 2003-US24866	20030807
WO 2004014787	A3	20040513		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003256902	A1	20040225	AU 2003-256902	20030807
BR 2003013582	A	20050628	BR 2003-13582	20030807
CN 1688676	A	20051026	CN 2003-823901	20030807
IN 2005KN00347	A	20060929	IN 2005-KN347	20050307

PRIORITY APPLN. INFO.:

US 2002-213896	A	20020807
WO 2003-US24866	W	20030807

AB A carbon-bearing feedstock (e.g., methane) is reacted with oxygen and water in a partial oxidation reactor to produce a mixture of hydrogen and carbon monoxide. The hydrogen is removed as a first product and the remaining carbon monoxide is reacted with steam over a bifunctional catalyst to produce higher hydrocarbons and carbon dioxide. The bifunctional catalyst provides water gas shift and Fischer-Tropsch functions. A process flow diagram is presented.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:302780 CAPLUS

DOCUMENT NUMBER: 138:305805

TITLE: Method for synthesis of hydrocarbons in an triphase reactor in the presence of a catalyst comprising a Group VIII metal supported on zirconia or zirconia-alumina mixed oxide

INVENTOR(S): Roy, Auberger Magalie; Revel, Renaud; Tissot, Virginie; Enache, Dan

PATENT ASSIGNEE(S): Institut Francais du Petrole, Fr.; ENI S.p.A.; Agip Petroli S.p.A.

SOURCE: Fr. Demande, 16 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2830858	A1	20030418	FR 2001-13138	20011011
FR 2830858	B1	20031212		
CA 2462535	A1	20030530	CA 2002-2462535	20021008
WO 2003044126	A1	20030530	WO 2002-FR3415	20021008

W: CA, US, ZA
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT,
 LU, MC, NL, PT, SE, SK, TR
 EP 1436360 A1 20040714 EP 2002-803430 20021008
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
 ZA 2004002139 A 20050721 ZA 2004-2139 20040317
 US 2005282917 A1 20051222 US 2005-76033 20050310
 US 7241815 B2 20070710

PRIORITY APPLN. INFO.: FR 2001-13138 A 20011011
 WO 2002-FR3415 W 20021008
 US 2004-492481 A1 20040412

AB A process is described for hydrocarbon synthesis starting from a mixture containing H and carbon monoxide, and, optionally, CO₂ in the presence of a supported catalyst containing ≥ 1 metal of Group VIII. The support contains zirconia or a mixed oxide zirconia-alumina and the zirconia is there in quadratic and/or amorphous form. The aforementioned catalyst is implemented in a liquid phase in a triphasic reactor. The products contain $\geq 50\%$ C₅ hydrocarbons and $< 20\%$ CH₄.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:960663 CAPLUS

DOCUMENT NUMBER: 138:26100

TITLE: Method for the manufacture of methanol and higher hydrocarbons from synthesis gas using a Fischer-Tropsch-reaction step and a hydrogen-separation-and-hydrogenation step

INVENTOR(S): Brown, Frank Clifford

PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK

SOURCE: U.S., 7 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6495610	B1	20021217	US 2000-597067	20000619
PRIORITY APPLN. INFO.:			US 2000-597067	20000619

AB Methanol and higher hydrocarbons are produced by synthesizing the hydrocarbons from synthesis gas containing hydrogen, carbon monoxide, and carbon dioxide by the Fischer-Tropsch reaction, separating the higher hydrocarbons, and synthesizing methanol from the residual gas. Preferably hydrogen is separated from the synthesis gas prior to the Fischer-Tropsch reaction and at least part of the separated hydrogen is added to the residual gas prior to methanol synthesis; a process flow diagram is presented.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:927372 CAPLUS

DOCUMENT NUMBER: 138:5855

TITLE: Fischer-Tropsch process using particulate catalyst in a continuously stirred reactor for the manufacture of higher hydrocarbons from synthesis gas mixtures containing carbon dioxide

INVENTOR(S): Huff, George Albert; Nay, Barry

PATENT ASSIGNEE(S): BP Exploration Operating Company Limited, UK; Davy Process Technology Limited

SOURCE: PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002096836	A2	20021205	WO 2002-GB2321	20020517
WO 2002096836	A3	20030612		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002313118	A1	20021209	AU 2002-313118	20020517
EP 1390325	A2	20040225	EP 2002-738318	20020517
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004534874	T	20041118	JP 2003-500016	20020517
US 2004152794	A1	20040805	US 2003-477212	20031110
US 7138434	B2	20061121		

PRIORITY APPLN. INFO.:
 US 2001-293192P P 20010525
 WO 2002-GB2321 W 20020517

AB A process for converting synthesis gas to higher hydrocarbons, at an elevated temperature and pressure, comprises continuously introducing a synthesis gas feed stream containing 0.1-50 volume% of carbon dioxide into a continuously stirred reactor system comprising a reactor vessel containing a suspension of a solid, particulate Fischer-Tropsch catalyst suspended in a liquid medium where the solid particulate Fischer-Tropsch catalyst is stable in the presence of carbon dioxide.

L1 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:725595 CAPLUS
 DOCUMENT NUMBER: 138:290169
 TITLE: Fischer-Tropsch reaction and catalysts for the production of gasoline and diesel-fuel hydrocarbons from carbon oxides and hydrogen
 INVENTOR(S): Mysov, V. M.; Ione, K. G.
 PATENT ASSIGNEE(S): Nauchno-Inzhenernyi Tsentr "Tseosit" Ob'edinennogo Instituta Kataliza So RAN, Russia
 SOURCE: Russ., No pp. given
 CODEN: RUXXE7
 DOCUMENT TYPE: Patent
 LANGUAGE: Russian
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2180651	C1	20020320	RU 2001-101064	20010111
PRIORITY APPLN. INFO.:			RU 2001-101064	20010111

AB Iron-containing ores or their compns. with aluminosilicates or aluminophosphates at a weight ratio of 20:80 to 80:20 are used as catalysts in a Fischer-Tropsch process conducted under straight-flow or circulation conditions, at 220-360°/10-100 atm with an initial synthesis gas gas-hourly space velocity of 100-5000 h⁻¹ using an initial H₂-CO molar ratio of 1-3:1, resp., and a carbon dioxide level in the reactor-inlet gas

stream of 0.01-30%. The catalyst reduction is carried out with synthesis gas at 220-360/10-100 atm and a synthesis gas-hourly space velocity of 100-5000 h⁻¹ such that increased catalyst efficiency is observed and increased yields of gasoline and diesel-fuel fractions are produced.

L1 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:423944 CAPLUS

DOCUMENT NUMBER: 137:8469

TITLE: Production of synthesis gas from hydrocarbons in the presence of carbon dioxide by Fischer-Tropsch process

INVENTOR(S): Nakashizu, Shigenori; Iwamoto, Osamu; Saito, Kinjiro; Shintani, Noriyuki; Suzuki, Takashi

PATENT ASSIGNEE(S): Petroleum Association of Japan, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002161280	A	20020604	JP 2000-357848	20001124
PRIORITY APPLN. INFO.:			JP 2000-357848	20001124

AB Synthesis gas containing mainly H₂ and CO is produced from lower hydrocarbons (especially, CH₄) by reduction over the Fischer-Tropsch catalysts containing 0.1-50 wt% of Ru, and 0.1-20 weight% of the compds. of ≥1 alkali metals or alkaline earth metals on porous Mn oxide supports having sp. surface area 4-200 m²/g and average grain diameter 0.5-150 μm in the presence of 0.5-50% CO₂ under reducing gas atmospheric of 200-350° and 1-10 MPa. The method is superior in olefin selectivity, high CO conversion and catalyst activity.

L1 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:772138 CAPLUS

DOCUMENT NUMBER: 135:305489

TITLE: Fischer-Tropsch and partial-oxidation processes for the production of hydrocarbons, electric power and carbon dioxide from synthesis gas and carbon-containing materials

INVENTOR(S): Bohn, Mark S.; Benham, Charles S.

PATENT ASSIGNEE(S): Rentech, Inc., USA

SOURCE: U.S., 13 pp., Cont.-in-part of U.S. Ser. No. 212,374, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6306917	B1	20011023	US 1999-376709	19990817
US 2002055545	A1	20020509	US 2001-963349	20010925
US 6632846	B2	20031014		
US 2002120017	A1	20020829	US 2001-963253	20010925
PRIORITY APPLN. INFO.:			US 1998-212374	B2 19981216
			US 1999-376709	A2 19990817

AB Apparatus and processes for producing power, liquid hydrocarbons and carbon dioxide from heavy feedstocks, using a partial oxidation reactor to produce a synthesis gas, a Fischer-Tropsch reactor to convert the synthesis gas to hydrocarbon products and tail gases containing hydrogen and

carbon dioxide, and a combined cycle plant to produce power from steam generated by recovering heat from the reactors and from combustible tail gases. By varying operating conditions and utilizing hydrogen for recycle to the Fischer-Tropsch reactor and/or hydrocracking wax products to produce lighter hydrocarbons, the process can selectively maximize the prodn. of power, hydrocarbons or carbon dioxide; the Fischer-Tropsch reactor can be a slurry reactor and can employ an iron-based catalyst.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:285340 CAPLUS

DOCUMENT NUMBER: 134:342252

TITLE: Analytical study on carbon dioxide reforming of natural gas

AUTHOR(S): Ohashi, Hirofumi; Sakaki, Akihiro; Inagaki, Yoshiyuki

CORPORATE SOURCE: Department of Advanced Nuclear Heat Technology, Oarai Research Establishment, Japan Atomic Energy Research Institute, Oarai, Japan

SOURCE: JAERI-Research (2001), 2000-058, i-iv, 1-64
CODEN: JERIE4

DOCUMENT TYPE: Report

LANGUAGE: Japanese

AB In recent years, considerable attention has been paid to carbon dioxide reforming of natural gas, namely CO₂ reforming, since it can produce synthesis gas with low hydrogen -to-carbon ratio preferentially used for prodn. of liquid hydrocarbons in the Fischer-Tropsch and methanol syntheses. This reaction has also very important environmental implications because CO₂, a greenhouse gas, may be converted into valuable feedstock. In JAERI, CO₂ reforming using the out-of-pile test facility, which is a 1/30 scale model of the HTTR hydrogen production system, is also being considered as an application of steam reforming. For the purpose to estimate the reformer performance in the facility, numerical anal. of natural gas reforming processes of CO₂ and combined reactions with steam and CO₂ has been carried out using math. model on heat and mass balance accompanied by chemical reactions. The reformer performance was evaluated in the effect of pressure, temperature, process gas composition and reaction rate consts. of the catalyst on conversion, product gas composition and heat consumption of He gas. And also, the potential of carbon formation by CH₄ cracking reaction and Boudouard reaction was estimated

L1 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:266109 CAPLUS

DOCUMENT NUMBER: 132:270437

TITLE: Method for production of catalyst used for manufacture of liquefied hydrocarbon from hydrogen and carbon dioxide

INVENTOR(S): Fujiwara, Masahiro; Tan, Shigeo; Soma, Yoshie

PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2000117108	A	20000425	JP 1998-306326	19981012
JP 3054701	B2	20000619		

PRIORITY APPLN. INFO.: JP 1998-306326 19981012

AB The method is carried out by mixing (A) composite oxide of Fe, Zn, and ≥ 1 element from group IVA and VIA and (B) zeolite and/or metal silicate, to obtain a mixed composite catalyst suitable manufacture of $C \geq 5$ branched hydrocarbons from CO_2 and H_2 via methanol synthesis and methanol-to-gasoline reaction with high selectivity.

L1 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:727426 CAPLUS

DOCUMENT NUMBER: 123:117899

TITLE: Catalytic reduction of carbon dioxide - The effects of catalysts and reductants

AUTHOR(S): Park, S. -E.; Nam, S. S.; Choi, M. J.; Lee, K. W.

CORPORATE SOURCE: Korea Research Institute Chemical Technology, Taejon, 305-606, S. Korea

SOURCE: Energy Conversion and Management (1995), 36(6-9), 573-6

CODEN: ECMADL; ISSN: 0196-8904

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several trials were performed for the catalytic fixation of carbon dioxide by using hydrogen as well as methane as reductants in order to convert into useful chems., such as oxygenates and hydrocarbons and synthesis gas, resp. As trials for the alleviation of chemical equilibrium limit in the CO_2 hydrogenation into methanol, the hybridized catalysts, such as H-zeolites and K-doped Fe/L zeolite catalysts were prepared by mixing with the methanol catalyst $Cu/ZnO/Al_2O_3$. The formation of oxygenated compds. and hydrocarbons, and of the Me formate were confirmed. Another trial was the Fischer-Tropsch reaction approach to synthesize hydrocarbons directly with CO_2/H_2 over iron-based bimetallic catalysts. Fe-Co bimetallic catalysts showed over 60% CO_2 conversion. Carbon dioxide reforming with methane was investigated over pentasil zeolite-supported nickel catalyst, which gave near equilibrium conversion of CO_2 and also near equilibrium yield on synthesis gas with high stability. Pentasil zeolite was superior as support, and alkaline promoters also attributed to have high dispersion and stability of nickel species.

L1 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:452572 CAPLUS

DOCUMENT NUMBER: 119:52572

TITLE: On-line single column capillary gas chromatographic analysis of all reactants and products in the synthesis of fuel methanol from hydrogen and oxides of carbon

AUTHOR(S): Marsman, Jan Henk; Breman, Berthold B.; Beenackers, Antonie A. C. M.

CORPORATE SOURCE: Dep. Chem. Eng., Univ. Groningen, Groningen, 9747 AG, Neth.

SOURCE: Journal of High Resolution Chromatography (1993), 16(3), 141-7

CODEN: JHRCE7; ISSN: 0935-6304

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The main problems with complete anal. of the components of fuel methanol, or in Fischer-Tropsch studies, are the several classes of compound present in the sample (permanent gases, water, alcs., hydrocarbons), its wide range of components, its b.p. range, and the wide range of component concns. A flexible online GC method has been developed for kinetic study of catalyzed chemical reactions of hydrogen and oxides of carbon. The single capillary column, temperature programmed method was designed

for complete anal. of reactants and products (hydrogen, carbon monoxide, carbon dioxide, water, C1-10 hydrocarbons, and C1-6 alcs.): a sample selection valve is used to switch between either the heated line used for input of the synthesis gases or the heated line used to transport reaction products from the reactor. Peak identification is performed by mass spectrometry and by comparison of component retention times. The automated anal. equipment is integrated with a process control computer and delivers repeatable anal. results for the individual components (relative standard deviation varying between 0.3 and 10% depending strongly on the concentration of the component and the accuracy of the determination of its peak area).